

Tulsa, OK 74146

918-250-4570 (fax)

918-250-0461

Date: April 17, 2012

Jack C. Montgomery VA Medical Center

1011 Honor Heights Drive Muskogee, Oklahoma

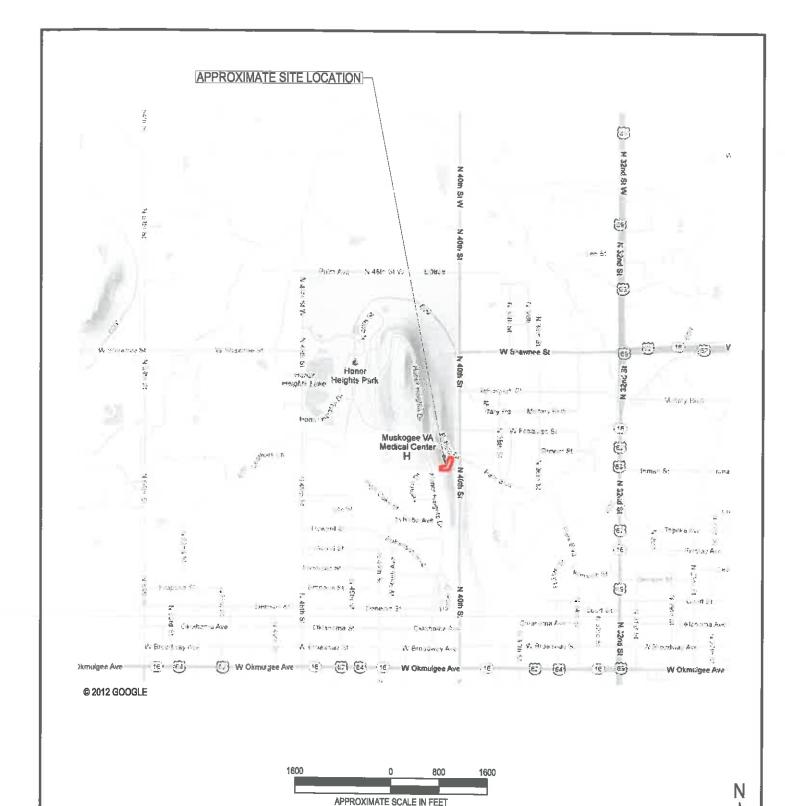
Attention: Amanda Riggs

Re: Proposed Pipeline

Job No:	04125086			
We are training:	Field Data Soils Test Welding Inspection Reports Drilled Piers Piles Concrete Asphalt Roofing Aggregate Non-Destructive Testing of Steel Non-Destructive Testing of Concrete	herewith under separate cover Laboratory Data X	Report Boring Logs Location Diagram Soil Samples Concrete Core Sam Construction Materi Samples Moisture-Density Consolidation Triaxial Compression Permeability Field Boring Logs Atterberg Limits	al on
On-site obs	Grain Size Analysis ervation services were provid	ed	Post-Tension Cable Full time	Part time
We have no on the data	ot been asked to interpret the , and cannot assume respons	data or to make design and ibility or liability for interpreta	or construction reco ation of this data by c	mmendations based others.
	Approximate ground surfact are shown near the top of t surveyor's level and rod. T	he boring logs. Terracon he top of the concrete wa	determined the elevel, at the southwest	vation using a
	surrounding the gas meter Location Plan). The bench	northeast of boring B-1 w	as used as a bench	mark (see Boring
		The range doorgined all all	itially elevation of 1	uu.u ieet.

Yours truly, TERRACON

Guy C. Griffin Project Manager





Project No. 04125086

Scala: SEE BAR SCALE

File No. 04125086

Datk: APRIL 2012



FAX. (918) 250-4570

MUSKOGEE

PH. (918) 250-0461

SITE LOCATION MAP
GEOTECHNICAL EXPLORATION
PROPOSED PIPELINE
JACK C MONGOMERY VA MEDICAL CENTER

EXHIBIT NO.

A-2

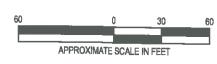
OKLAHOMA



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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

LEGEND ◆ BORING LOCATION



60		0	30	60
	_			
	APPROXIMA	TE SCA	E IN FEET	

Project Mingr:	GCG	Project No. 04125086
Drawn By:	DC	Scale: SEE BAR SCALE
Checked By:	GCG	File No. 04125086
Approved By:	BMW	Date: APRIL 2012

16	
Consulting Engineers and Scientists	
10830 EAST 56th STREET TULBA, OKLAHOMA 74148	
PHL (\$18) 250-0461 FAX. (818) 250-4570	MUSKOGEE

BORING LOCATION PLAN	
GEOTECHNICAL EXPLORATION	
PROPOSED PIPELINE	
IACK C MONGOMERY VA MEDICAL CENTER	
	OKLAHOMA

EXHIBIT NO.

	LOG OF BORING NO. B-1										
CL	JENT							<u> </u>		<u>Pa</u>	age 1 of 1
SIT	Jack C Montgomery VA Medical Center	PRO	IFC	- -		_					
	Muskogee, Oklahoma		<u> </u>			P	ropos	ed Pir	eline		
					SAN	MPLES	5			TESTS	
GRAPHIC LOG	DESCRIPTION	DEP ТН, ft.	USCS SYMBOL	NUMBER	ř ř	RECOVERY, in.	SPT-N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT	UNCONFINED COMPRESSION, psf	
/////	Approx. Surface Elev.: 104.0 ft	E	nsc	Ž	TYPE	REC	SPT	So≅	DR.	COI	ı
	3" Topsoil LEAN CLAY brown and dark brown, very stiff	_	CL	1	PA SS	18	12				
	LEAN CLAY with sandstone fragments, brown and light brown, very stiff (with sandstone seams below about 3 feet)	_	CL	2	SS	18	16				
	(with sandstone seams below about 3 leet)	_	CL	3	SS	18	32				
	BOTTOM OF BORING	5—									
The betw	stratification lines represent the approximate boundary lines ween soil and rock types: in-situ, the transition may be gradual.				!						
WA	TER LEVEL OBSERVATIONS, ft				E	3ORI	NG ST	ARTE			4-14-12

BOREHOLE BORING LOGS.GPJ 2011 TULSA.GDT 4/17/12 WD ¥ N/E Mr 🛣 WL

Terracon

BORING STA	RTED		4-14-12
BORING CO	4-14-12		
RIG	ATV	FOREMAN	TS
APPROVED	BMW	JOB# 0	4125086

	LOG OF BORING NO. B-2										
CL	Jack C Montgomery VA Medical Center									<u>r</u>	age 1 of 1
SIT	TE	PRO	JEC	T							
	Muskogee, Oklahoma	<u> </u>			CAL	F	ropos	ed Pi	peline		
	1			-	SAN	MPLES	3	-	 	TESTS	
GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	CS SYMBOL	NUMBER	H	RECOVERY, in.	SPT-N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT	UNCONFINED COMPRESSION, psf	
5	Approx. Surface Elev.: 119.0 ft	OE	nscs	Ş	TYPE		SPT	.¥Ö	Pcf	CO	_
	3" Topsoil LEAN CLAY with sandstone fragments, brown and dark brown, stiff		CL	1	PA SS		10				
	2 LEAN CLAY with sandstone fragments, brown and light brown, very stiff	- -	CL	2	SS	18	25				
			CL	3	SS	18	29				
The	BOTTOM OF BORING stratification lines represent the approximate boundary lines	5									
betw	veen soil and rock types: in-situ, the transition may be gradual.										
WA	TER LEVEL OBSERVATIONS, ft				\Box r	BORI	NG ST.	ARTE	:D	· · · · ·	4-14-12

WL ₹ N/E WD ¥ N/E

BOREHOLE BORING LOGS.GPJ 2011 TULSA.GDT 4/17/12

WL Ī V. WL



BORING STA	RTED			4-14-12
BORING CO	MPLETE	ED		4-14-12
RIG	ATV	FOREMA	N	TS
APPROVED	BM\M	IOB#	n	1125096

	LOG OF BOF	RING	NC). E	3-3					P	age 1 of 1
CL	Jack C Montgomery VA Medical Center				_	_		-			
SIT	E Muskogee, Oklahoma	PRC	JEC	T							
	muskogee, Okianoma	-			SAI	MPLE	Propos S	ed Pip	peline	TESTS	
GRAPHIC LOG	DESCRIPTION Approx. Surface Elev.: 135.5 ft	DEРТН, ft.	USCS SYMBOL	NUMBER	TYPE	RECOVERY, in.	SPT-N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT	UNCONFINED COMPRESSION, psf	
	3" Topsoil LEAN CLAY				PA						
	with sandstone fragments, brown and dark brown, very stiff		CL	1	SS	18	33				
	2.5 SANDSTONE+		CL	2	SS	9	50/3"				
	trace shale seams, brown and dark brown, cemented	_ _	<u> </u>		PA						
		- 5		3	SS	1	50/2"				
		- - -			PA		00.2				
		_ _ _			,						
		_ _		4	SS	1	50/2"				
		10—									
		_									
	12.5	_									
	SANDSTONE+ with shale seams, gray and dark gray, cemented	_									
::::	BOTTOM OF BORING			5	SS	3	50/3"				
	+Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.	į									
The	stratification lines represent the approximate boundary lines een soil and rock types: in-situ, the transition may be gradual.					'					
	TER LEVEL OBSERVATIONS, ft				Ti	BORI	NG ST	ARTE	D		4-14-12
WL	▼ N/E WD ▼ N/E AB	76					NG CC				4-14-12
WL WL	¥ N/E WD ¥ N/E AB TELL					RIG	ROVED	AT BM\		REMA	N TS